



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,392	02/21/2002	Dominique Chiaroni	Q68601	5621
23373	7590	07/22/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			WANG, LEMING	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/078,392

Applicant(s)

CHIARONI ET AL.

Examiner

Leming Wang

Art Unit

2638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) 7 and 9 is/are allowed.  
6) ☐ Claim(s) 1-3, 5, 6, 13, 14 and 19 is/are rejected.  
7) ☐ Claim(s) 10, 15-18, 20 and 21 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 recites the limitation "said group" in lines 7 and 13. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 3, 5, 13, 14, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by *Milton et al.* (US patent No: 6,556,321)

Regarding Claims 1 and 13, *Milton et al.* teach that an optical packet node for receiving and transmitting optical packets, said packet node comprising: a multiwavelength band splitting device (10, Fig.3) for splitting received optical packets transmitted via multiwavelength bands (12, 17, Fig.3, Col.2, lines 12-20; Col.4, lines 1-2; Col.5, lines 1-2, 32-33) into at least three groups (Col.4, lines 35-37; Col.5, line 38),

each group comprising one multiwavelength band (12, Fig.3, Col.5, lines 1-2, for example, output from multiplexer 19 comprising of a multiwavelength band), a multiwavelength band combining device (11, Fig.3) for combining said at least three groups of multiwavelength bands (Fig.3, Col.2, lines 12-20; Col.4, lines 35-37; Col.5, line 38), at least two optical packet add drop multiplexers (18, 19, Fig.3), each optical packet add drop multiplexer placed between said multiwavelength band splitting device (10, Fig.3) and said multiwavelength band combining device (11, Fig.3), and each optical add drop multiplexer serving to add at least one individual wavelength (Fig.3, and Col.5, lines 26-31) to a respective group of a multiwavelength band group (14, 18, 17, Fig.3), and to drop and at least one individual wavelength (Fig.3, and Col.5, lines 14-16) from a respective multiwavelength band group (12, 19, 14, Fig.3), and a load balancing stage (15, Fig.3, cross-connect 15 interconnect between bands, added, and dropped wavelengths).

Regarding claim 2, *Milton et al.* teach the optical packet node as claimed in claim 1, wherein said load balancing stage (15, Fig.3) comprising a packet switch (15, Fig.3, Col., lines 18-21) to provide a load balancing between the data packets to be added and transmitted and the available wavelength capacity (15, Fig.3, Col.5, lines 18-21, 59-63).

Regarding claim 3, *Milton et al.* teach the optical packet node as claimed in claim 1, wherein said optical packet node further comprises of least two interface modules

(16, Fig.3, Col.5, lines 20; 115, Fig.4, Col.5, line 62) connected to the load balancing stage to provide the data packets to be added and transmitted (Col.5, lines 18-21).

Regarding claim 5, *Milton et al.* teach the optical packet node as claimed in claim 1, wherein said multiwavelength band splitting device comprising a demultiplexer (10, Fig.3), a filter (Col.4, lines 65-67 to Col.5, lines 1, lines 36-41), and that said multiwavelength band combining device comprises a multiplexer (11, Fig.3).

Regarding claims 14 and 19, *Milton et al.* teach the load balancing stage converts optical packets transmitted over a first wavelength of a multiwavelength band group to a second wavelength of another multiwavelength band group for transmission (Fig.3, Col.2, lines 12-20; Col.4, lines 1-2; Col.5, lines 1-2, 32-33).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Milton et al.* (US patent No: 6,556,321) in view of *Sotom et al.* (US patent No: 5,796,501).

Regarding claim 6, *Milton et al.* differ from the claimed invention in that *Milton et al.* do not teach the load balancing stage is telemetrically programmable. However, *Sotom et al.* disclose a control unit that is programmed (Col.5, lines 55-57). Accordingly, it would have been obvious to a person having ordinary skill in the art at the time of the invention to incorporate a programmed control unit into the modified system by *Milton et al.* to execute selection algorithm and manage the conflicts.

#### ***Allowable Subject Matter***

6. Claim 7 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. Claims 10, 15-18, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-3, 5, 12, and 13 have been considered:

A. Applicant argue that "*Milton et al.* fail to teach or suggest at least a load balancing stage that manages traffic levels of optical packets to prevent overloading by sharing selected packets from one multiwavelength band group to another

multiwavelength band group, as recited in claim 1. The cross-connect (15) shown in Figure 3 of Milton et al. merely connects between different wavelength bands. There is not teach or suggestion that the cross-connect (15) of Milton et al. manages traffic levels of optical packets to prevent overloading. Based on the foregoing reasons, Applicants submit that Milton et al. fail to teach or suggest all of the claimed elements as arranged in claim 1. “

Regarding argument A, please note *Milton et al.* teaches that the cross-connect 15 with interconnecting bands, adding and dropping wavelengths in Fig.3 is intently used for changing wavelengths to overcome the problem of path availability, for example, Col.3, lines 9-16 and Col.5, lines 21-26, to provide more capacity due to the higher bit rate services coming out of the access networks as well as the growth in the number and size of the access networks reflecting the growth in the number of end users, for example, Col.2, lines 3-6, and examiner found out applicant did not disclose any detail structure, element, and operational principle in the claimed cross-connect in the specification and drawing, and the cross-connect 15 with interconnecting bands and adding and dropping wavelengths teaches functions taught by *Milton et al.* is equivalent to the functions of claimed “a load balancing stage being connected to at least two of said add drop multiplexers, to provide an interconnection between at least two wavelength bands”.) connected to said at least two optical packet add drop multiplexers (18, 19, Fig.3) to provide an interconnection between at least two multiwavelength wavelength band groups, wherein said load balancing stage manages traffic levels of optical packets to prevent overload by shifting selected packets from one

multiwavelength band group to another multiwavelength band group (15, Fig.3, Col.2, lines 3-6, Col.3, line 9-16, and Col.5, lines 21-26, as it is mentioned above that applicant did not disclose any detail structure, element, and operational principle in the claimed cross-connect in the specification and drawing, teachings by *Milton et al.* is equivalent to the functions of claimed "provide an interconnection between at least two multiwavelength wavelength band groups, wherein said load balancing stage manages traffic levels of optical packets to prevent overload by shifting selected packets from one multiwavelength band group to another multiwavelength band group". Also, please note it is known in the art to use a cross-connect to balance traffic load, for example, see the teaching of *Beshai et al.*, US Pub. No; 2002/0083195. Therefore, the claimed limitation is anticipated by the teaching by *Milton et al.*:

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leming Wang whose telephone number is 571 272 3030. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272 3112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leming Wang  
7/18/2005



KENNETH VANDERPUYE  
PRIMARY EXAMINER